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Photo By Bhagat Singh

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A Ladakhi woman in yak camp in Changthong WLS

Photo - A.S. Negi



Two of the WLPs members monitoring Changthand WLS in
Ladakh

Photo - A.S. Negi

Environment Through A Spritual Lens

Dena Merriam

I was staying at an ashram on the Ganga. Early one morning on the river bank local people performed a puja to a wonderful old tree nearby with incense and lamps. It was something you would never see in the West. After they left, I moved to where they had been sitting under the tree, and in the quiet morning light I understood what they had come to do.

The environmental crisis is a spiritual crisis. As long as we seek to address one and not the other, we will not get far. Our industrialized vision has taken away our ability to see the living spirit in the tree, in the river, in the mountain – and to know that the life energy sustaining them and us is the same.

There is now wide-spread recognition of the need to change the way we relate to the natural world. But the current approach is much like the arms reduction movement. Reducing carbon output is like reducing military arsenals, addressing the outer manifestations without changing the inner components that led to militarization and environment degradation in the first place.

Reducing arsenals alone wont bring peace, and reducing carbon output won't restore the health and balance of our planet's life systems. As long as it is a matter of mathematics, and not consciousness change, the root cause of the problem won't go away.

At a UN religios leaders' summit in New York, participants disagreed on whether human beings can rightfully seek to "control" nature or should adopt an attitude of respect and even "reverence" for nature. Today, we have come to recognize the reality of climate change and the accompanying environmental crisis, but we shy away from addressing deeper causes. Our ancestors saw the sacredness of the rivers, mountains and forests.

So much has been lost these last 50 years through deforestation, the digging and mining of mountains, the damming and polluting of waterways and the annihilation of so many species. It is a wonder that Earth has not responded more vigorously to our declarations of war. Whether we are at conflict with each other, or with the natural world, the mindset is the same.

The environmental crisis may be a blessing in disguise. It is bringing us to the point of no alternative but change and forcing the evolution of a new paradigm of being – based on what might be called the feminine principles of interconnection, oneness and inclusion – leaving behind the old paradigm of dominance and control. These feminine principles can guide us back to what our ancestors knew and help turn this crisis into a catalyst for transformation.

Women have a special role to play in this process and the attributes we know as women and mother can help guide the shift in understanding that will reconnect us to the natural world. When the Native American people hunted the buffalo, as they needed to do for survival, they first sought out the Buffalo Spririt for its blessing. They knew their hunt to be an exchange of life force for life force and honoured the being that was sacrificing its life.

Economic growth has been depleting the life force of our planet, and so we must ask the essential question – will this secure or threaten our survival? And if we choose to continue our course, let us seek the blessing – and forgiveness – of all beings, trees, rivers, and all others whom we are taking down as sacrifice.

Curtsey : Times of India, New Delhi, 7th March 2008

Moves should be taken to ensure there was something left to hand on to future generation - Prince Charls

Letters to the Editor

5th Nov. 08

Dear Shri Negi,

I wonder if I had the opportunity to meet you during one of my visits to Corbett National Park. Wildlife Photography has been my hobby and I have written two books: "The Tiger Is A Gentleman", and "The Vanishing Tiger." My website is 'www.wildlifeofvivek.com' and I used to write regularly for 'Sanctuary' and 'Frontline' before I started writing my books.

I have always admired your dedication to wildlife conservation, a subject close to my heart.

I am endorsing a cheque for Rs 1275/-. Rs 250/- is for renewal of my annual subscription and the rest is my donation to the society.

I have a vast collection of wildlife pictures from India and Africa. I shall be happy to send the pictures required by you on a CD. You may use them as you think fit. Of course there will be no charge for their use

With regards,

Your sincerely
Vivek K. Sinha

DATE: 15/04/08

To,
Sh. A.S. NEGI, I.F.S(Rtd)
Honry. Secretary-WPSI
12, Sewak Ashram Road, Dehradun -248001 (U.K)

Respected Sir,
Cordial Season's Greetings!

Thanks for sending the latest issue of CHEETAL (Vol.46 No. 1 & 2) having one of our general articles on primates. I enclose here with another article entitled- "Maternal behaviour in Hanuman Lngur, *Semnopittheus entellus*" for Cheetal (p-1-12). And one more MS (of a Hindi article on Chimpanzee) is already submitted in Oct-Nov-2007 for our society's journal.

I also enclose herewith duly filled, signed and my photo pasted I-Card (Life Membership of WPSI) of mine, please send it back after your signature.

Would you please arrange to instruct to send me 4 copies more of CHEETAL (Vol.46 No. 1 Y& 2) for my colleagues here.

With regards, thanking you,

Yours Sincerely
Dr. L.S. Rajpurohit

Associate Professor, Department of Zoology ,
Faculty of Science, JNV University, Jodhpur, (Rajasthan)

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Wildlife Phot Series for Identification

A paradise in the Himalayas

The Jigme Dorji National Park, Bhutan's largest sanctuary, abound in flora and fauna. What is unique to it is the mountain goat, goral.

A.J.T JOHNSINGH*

One location in Bhutan every nature lover should visit is the Cheri monastery, 15 km north of Thimphu. The seat of the first monastic body in Bhutan, it was built in 1620 by Shabdrung Ngawang Namgyal, a Tibetan native and a holy man. It is situated at an altitude of 2,600 metres on a steep mountain slope on the southern boundary of the 4,200 sq km Jigme Dorji National Prk, and is in the transition zone between broad-leaved forests characterized by species such as oak, rhododendron, maple and walnut and conifer forests with species such as spruce, fir hemlock and the Himalayan yew.

The short drive to the monastery from Thimphu (2300m) along the winding mountain road that runs along the right bank of the Thimphu *chhu* (river), is invigorating and enjoyable, as it goes through a cool, verdant and scenic valley with small townships, villages and cultivated fields. The steep mountains on either side of the valley have dense blue pine (*Pinus wallichiana*) forests with patches of oak, rhododendron and other broad-leaved species.

The river originates in the Jigme Dorje National Park, which is the largest protected area in Bhutan. The park is named after the third king of Bhutan, lovingly described as the Father of Modern Bhutan. He died in 1972 at the age of 44 while on an official visit to Africa. In summer, the river fed by the melting snow, flows furiously from the park. It is a beauty to watch the whitish torrential waters tinged with blue roll over the rocks and form emerald green pools.

When I first visited the monastery in May 2004, the flowering of *Rhododendron arboretum* was coming to an end, and its blood-red flowers, dispersed in the forest canopy, although fading in colour, stood conspicuous amidst the greenery. In late September, red flowers of *Colquihonia coccinea* swayed in the breeze and peeped from the shrubbery on the banks of streams. Golden yellow flowers of *Senecio chrysanthemoides*, on metre-high fragile stems, danced in wet open areas, even in the slightest wind and I had to wait for several minutes to get a satisfying picture. The purplish blue flowers of *Erigeron alpines* also contributed to the riot of colours.

The drive to the base of the mountain and the uphill walk for over a kilo-metre along a well-maintained bridle path, would thrill any bird lover. One can see on the way white-capped water redstarts (*Chaimarrornis leucocephalus*) hunting insects along the river, blue whistling thrushes (*Myophonus caeruleus*) screeching; large groups of white throated laughing thrushes (*Garrulax albogularis*) rummaging through the forest canopy for insects and bird nestlings; and

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the spotted nutcracker (*Nucifraga caryocatactes*), with conspicuous white patches on the sides of the tail, hunting for beetles and breaking open the cones of spruce and pine for seeds.

What attracted me to the Cheri monastery was the rather tame population of gorals (*Nemothaedus goral*) that comes from the nearby steep ridges to feed on the lush grass and herbaceous vegetation around it. The goral is a primitive mountain goat and is distributed in a wide arc, covering Pakistan, India, Nepal, Bhutan, Myanmar, Thailand, China, South Korea, North Korea and Russia. Three species and eight sub-species of gorals have been identified of which two species and four subspecies occur in India. The goral exhibits its primitiveness by being solitary and monomorphic (the male and the female look alike).

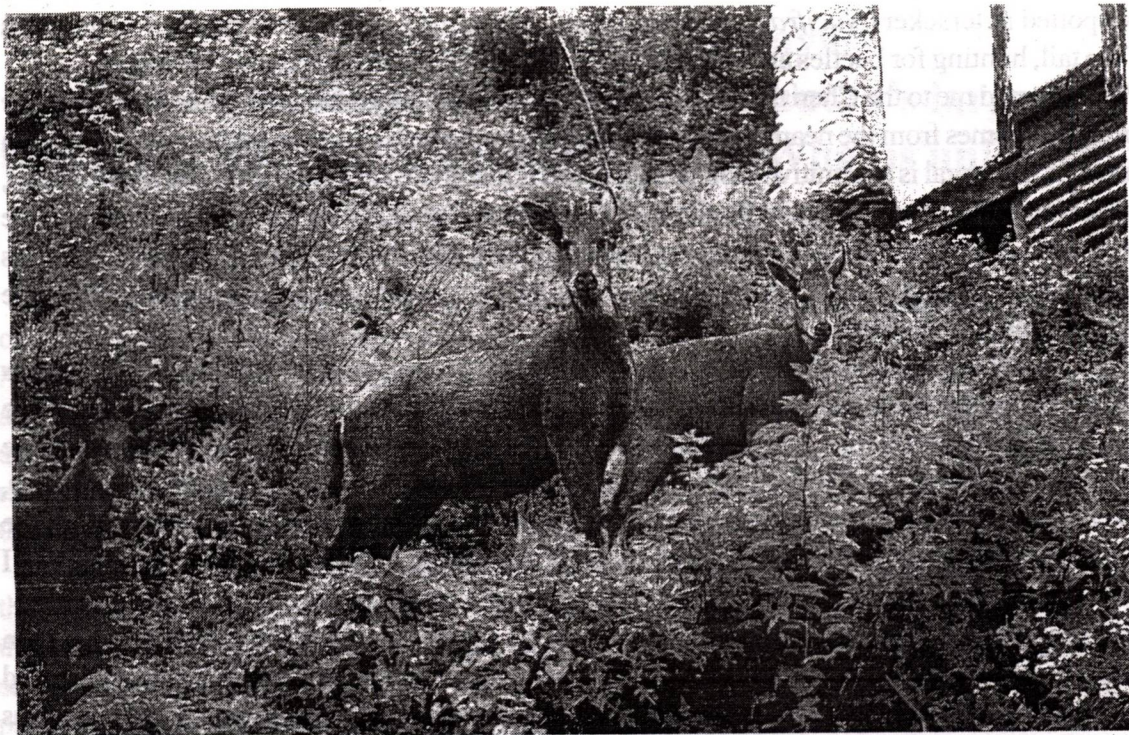
I got fascinated by the goral as a boy when I first read a Tamil translation of *Man-eaters of Kumaon* by Jim Corbett, where there is an absorbing description of Corbett shooting three gorals in the chapter on the Champawat man-eater. Therefore, when I joined the Wildlife Institute of India, which is situated in DehraDun at the foothills of the Himalayas, I made it point to see, observe and photograph gorals in the adjoining Shivalik and Outer Himalayan ranges. With the help of two dedicated and nimble-footed students, Charudutt Mishra and Anand Pendharkar, I could also make a detailed study on this hitherto little-known species.

The gorals around the Cheri monastery differ from the gorals I have observed around Dehra Dun in two aspects: they are much darker in colouration and their pellets are much more roundish and darker. They live in a habitat with much higher rainfall, feeding on lush green grass and herbaceous vegetation, including *Geradiana heterophylla*, a nettle plant with large leaves.

I also saw near the monastery an adult male Himalayan monal (*Lophophorus impejanus*), the largest and may be the most beautiful of all the Himalayan pheasants with its metallic bronze-green and cinnamon colouration, standing on a path frequented by the goral. A goral kid came along the path, and on seeing the monal it ran towards it playfully, at which the frightened monal flew to a ledge on a steep rock-face. The goral kid inquisitively watched the pheasant for a few seconds, and then ambled away.

The only problem faced by the Cheri goral is the dogs that follow devotees to the monastery. The dogs harass the goral. Once two dogs barked and chased a male goral, which nimbly went up a rock-face and stood there whistling in alarm until the dogs moved away. The rock-faces provide an escape point to the goral from predators such as tigers, leopards and dogs.

Every time I made the short stiff climb up the steep, mountain, I asked myself whether such an exertion was necessary. But when I stood in the company of the goral under the majestic weeping cypress trees (*Cupressus corneyana*), which were possibly planted when the monastery was built, breathing the cool and fresh mountain air, imbibing the serenity of the area and savoring the enchanting view below, all the difficulties I had while climbing the mountain were forgotten. All over Asia, in mountains and forests, there are numerous places of worship belonging to different faiths. If these places like the Cheri monastery take care to keep the environs serene and garbage-free and protect wildlife, it will go a long way in ensuring the future of wildlife, which is dwindling in most parts of the world.



A goral Family



A solitary goral male

A Report on Nesting and Breeding of White-Rumped Vulture, *Gyps Bengalensis* ((Gmelin) in Kolkata Megacity, India

Rina Chakraborty*

Out of the nine species of vultures, (so far known) from the Indian sub-region of which five have already been declared as threatened by the IUCN. The White-rumped vulture, *Gyps bengalensis* (Gmelin) is one of them and its status declared as CRITICAL due to extremely rapid population decline(IUCN). Even in the last quarter of the 20th century this bird has been an important scavenging agent for maintaining environmental cleanliness. During the last decade, research and so many investigations were carried out throughout the world, where a sharp decline of its population was widely incriminated due to eating of carcass of live stock treated with the killer drug Diclofenac.

A study was carried out during the last few years in and around Kolkata, the capital of West Bengal, a megacity of India. Earlier, mostly upto the 3rd quarter of the 20th century, three species of vulture viz. White-rumped vulture, Slender-billed vulture and Red-headed vulture were very common in and around Kolkata. But in fact, population of White-rumped vulture was much more than the other two species. Gradual population decline of the above mentioned three species was identified from 1990s but a sharp down in the population curve was observed during 1999 to 2003. In fact, there was no vulture seen in the city from 2003 but TNN on 14th March, 2008 reported "Kolkata and its adjoining areas had around 70 vultures till 2004". Once the White-rumped vulture was distributed from Baluchistan (Pakistan), east through India to Indochinese sub-region and Malay but not in Sri Lanka(Ripley 1982). Except patchy distribution, it has disappeared from most of SE Asia in the early 20th century. Since 1996 it has suffered a catastrophic decline, over 95% in its remaining stronghold in Pakistan and India (IUCN 2007).

The usual roosting and breeding places of the birds in and around Kolkata were Bali and Botanical Garden (Haora district), Rabindra Sarobar, Zoological Garden, Kashipore, Tala, Dhaksineswar (Kolkata district) and Bhangur (South 24 Parganas district). The main feeding places were around the drainage canals, Tolly nalla, Adi Ganga, Dshapa, Chetla, Alipore, waste lands near Tollygunge Golf club, and any area where they found carcasses. From 2003 onwards the scenario had totally changed and no vulture was seen in and around Kolkata. From 2005 an effort was made to searching out vulture species around Kolkata city both on foot as well as vehicle. From 2005 to 2007, there was no vulture observed in proper Kolkata but a very few were observed in the adjacent areas although no nest was identified (Table I). In January 2008, a flock of 28 White-rumped vulture was observed in the garden of Victoria Memorial on three large trees z. *Parkia aculeate*, *P. biglandulosa* (family Leguminaceae) and *Pterygota alata* (family Sterculiaceae). In the month of April 2008, the population rose upto 39 and identified on the same trees with nestlings. Usually it breeds from October to March and the nest is an untidy platform of

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sticks and twigs with a shallow depression in the middle, placed atleast 15 to 20m high on a tall tree. Though there are so many large trees and a number of adults in the flock yet only three nests were built by them approximately 17 -20m high on the above mentioned trees. Normally it lays a single thick shelled, drab white coloured egg measuring about 85.8 X 64.2mm (Ali and Ripley 1981). Both male and female were seen to feed the nestlings with regurgitated gobbets. In the month of May, the juveniles were seen to leave the nest. It takes 45 days for incubation, and in the present case it may be an example of late nesting and breeding. A continuous monitoring showed a gradual decline in number but it may be due to dispersal of the bird for hunting of food. During the last week of July 2008, the population counted maximum upto 17 in the same monitoring site. From August onwards, there was no vulture seen in the same premises. On the other hand a small population of White-rumped vulture was observed at Rajarhat, North 24 Parganas from August to October 2008. It may be the same flock which was in the garden of the Victoria Memorial and shifted little east to Kolkata with new born babies

Table I. Sighting of white-rumped vulture in and around Kolkata (2005-08)

Sl. No.	Name of the Place	Date/ Year	Presence(+)/ Absence(-)	Nest + Nestling	Population count	Sur- veyed by
1	Bhojerhat/Bhangur (South 24-Parganas District)	2 nd , 3 rd , 18 th , 22 nd October 2005	+	-	8 (Sastayangachhi, Dakhkhin Para), 2 (Mirpukur), 2 (Jirongachha)	NEWS
2	Bamanghata, Rajarhat (North 24Parganas District)	23 rd , 27 th October, 2005	-	-	-	NEWS
3	From Kolkata to Kalyani (Nadia District)	28 th , 29 th October 2005	-	-	-	NEWS
4	Latbagan Barrakpore (North 24 Paraganas disteict)	28 th , 29 th October 2005	+	-	2	NEWS

5	Rajarhat (North 24 Parganas district)	2007	+	-	15-20	In-formed by local people
6	Wasteland near Golf Club Kolkata	2006 (January) 2008 (June)	-	-	-	ZSI
7	Botanical Garden, Haora	2006 (January) 2008 (June)	-	-	-	ZSI
8	Chetla, Kolkata	2006 (January) 2008 (June)	-	-	-	ZSI
9	Victoria Memorial Kolkata	January April & July 2008	+	-	28 39 17	ZSI
10	Rajarhat, North 24 Paraganas	August September & October 2008	+	-	3 14 (in the sky) 7	ZSI

NEWS: Nature Environment and Wildlife Society, ASI Zoological Survey of India

After a long gap the White-rumped vulture is breeding in the city of Kolkata but apparently those birds look little sick. During the present survey no feeding ground of vulture could be identified. Due to modernization of city life there is no cattle shelter in the city, and throwing carcasses in the wasteland, drainage canals, Hugli River has been totally stopped. It is realized that there is an acute food crisis for the vultures as it is tough to get carcasses as in and around the city. Moreover, now-a-days the skin of cattle is highly priced by leather houses, thus after the death of a cattle the leather is sold out and the meat is used by the fish farms for feeding *Clarias garipinus* (Burchell), a North African catfish, an exotic species to India. Other than White-rumped vulture no other species so far been observed in and around Kolkata.

For conservation of this highly threatened species, the following recommendations may be made:-

1. In-situ conservation in protected areas.

2. Preparation of a vulture sighting calendar with a wide net work.
3. Conservation of feeding and breeding ground of vulture.
4. Though banned in 2006 by Govt. of India, regular monitoring on the use of the dreadful drug diclofenac is needed.

Source

Ali, S. & Ripley, S.D. 1981. *Handbook of the birds of India and Pakistan*, Vol. 1 Pub: Oxford University Press, Delhi.

Anon, 2006. Action plan for vulture conservation in India. MoEF, Govt. of India

Ripley, S.D. 1982. *Asynopsis of the birds of India and Pakistan*. Pub; Bombay Natural History Society. Pp. 1-652

Websites:

www.iucnredlist.org

www.naturewildlife.org

The Vanishing Tiger

Kamal Singh*

Not a day passes without a special report on the Tiger not appearing in the news. Infact this has beaten hollow, the daily appearance of Laloo Yadav and Aishwarya Rai.

But now, after 2 months of jostling and posturing, with umpteen meetings and tours by the Special Task Force, appointed by the P.M., what have we arrived at? Nothing, except for highlighting the rapid extermination of the tiger with not one practical suggestion (or action taken) of putting an end to the matter.

The author has been campaigning for more than a decade for conservation (not preservation) of Wildlife (including the Tiger and other Carnivores), of habitat, forest-cover etc by sending articles to esteemed journals like Hindustan Times, Statesman and Times of India, one such being "Allow Hunting, Save Animals" published by the Hindustan Times in their issue of 10 October 1992. Besides writing to the press, letters were also sent from (1950 to date) to the press. Letters were also sent to the various Forests and Wildlife authorities, in Bihar and U.P. including one to the Prime Minister, Late Hon'ble Smt. Indira Gandhi in 1981.

The following points were highlighted by me:-

1/ Environment & Habitat

The need to protect habitat and augment the same wherever reduced or threatened. Deforestation to be checked and afforestation properly planned and implemented in every State. Planting of Eucalyptus, which destroys ground-cover and shrubs, to be discouraged or totally stopped. The forest-cover which is substantially reduced over the years, particularly after Independence (1947), to be brought back to original extent as far as is possible, keeping in mind the compulsion of a fast growing human population.

2/ Reserved Forests, Sanctuaries, Parks and Tiger Reserves.

Considerable looseness is rampant in as much as the infiltration by cattle for grazing and by human beings for collecting of fire-wood and also new settlements being allowed on the fringes of Reserved Forests and Sanctuaries.

At Mohan (Ramnagar, Dist. Nainital -UK.) on the Kosi river and not far from the Corbett National Park, in IIT Institution was under construction in 1981. This area fell within the Tiger Reserve area. The conservator in charge at Ramnagar, had strongly objected to this and also to the wanton destruction of 20 miles of dense and pristine forest between the Ranikhet highway and Kosi river - about a mile in width, through which animals from the Corbbet Park side, would come-down, under safe cover, to drink water from the Kosi river. This unwarranted reclaimsions of forest land was, as disclosed, for purposes of settlement of Harijans.

The matter was brought to the attention of the Prime Minister, the Late Mrs. Indira Gandhi by the author.

In my opinion, if any ban is to be imposed, it should be on such ridiculous populous schemes, provided there is a political will and determination.

3/ Considering the mismanagement and inefficiency in several states, particularly in Bihar and U.P./Uttaranchal, I feel convinced that the only answer is to centralize-Forests & Wildlife and for the Centre to organize a cadre of forest staff, like in African countries, where a prevalence and threat of poachers is as much as a challenge as in our own country. But these African countries have organized their Wildlife management on an effective and efficient basis, quite non-existent in ours.

4/ The hunting of game animals and game birds (excepting for endangered species including the tiger and leopard) should be lifted immediately, so that genuine sportsmen, on payment of fees & royalties (as fixed by Govt.) could enter into Govt. reserved forests (as in the past before the ban was imposed), and strict rules of hunting as laid-down by the British Govt. are strictly enforced.

N.B If the Forest & Wildlife departments are unable to enforce rules of hunting by permit-holders, then I ask my readers, can they ever prevent poaching specially that of the endangered tiger?

When and if the ban on hunting is lifted and licensed sportsmen are permitted to hunt in reserved forests, not only will there be check on un-authorized hunting (poaching) but also first hand information coming to the Forest authorities what really goes on in a particular forest block. Secondly, India is the only country in the world where a total ban has been imposed on hunting and shooting of game animals and birds, barring the species which are protected. The Cheetal (deer), the Nilgai or Blue Bull (antelope) and Wild Pigs, all three of them are a serious pest for farmers. Whereas the Cheetal and Pigs are forest-bound, the Nilgai or "Ghar Roj", is predominately a denizen of cultivated areas, particularly in the vast districts of U.P. and Bihar. All three species above named, take a heavy toll of farmers when whole fields at night are wiped out of crops, to the utter frustration and agony of cultivators. Countries like Scandinavia, Russia, Greenland, Canada, U.S.A, U.K, Africa, New Zealand which abound with deer, e.g. Rain Deer, Caribou Elk, etc in the Arctic countries, Rain deer and other deers in U.S.A. antelopes in Africa and the imported deer population in New Zealand, organize regular "culling" operation, where sportsmen are invited and which is beside the normal annual permits allowed per person, for the number of deer or antelope one can hunt in the year and that only for a limited period in the year, when hunting in open.

The author in his 75 years of close association with Forests and Wildlife, shot only 5 tigers, before the ban on hunting was imposed and organized 4 tigers for others (friends and relatives). Tigers have been faced on the ground during beats for Jungle Fowl in DehraDun – quite harmless actually which just looked at me and leaped past and disappeared. In all the shooting and hunting done by me, never were any rules broken e.g. killing of females and young (deers and antelopes), shooting after dark with jeep and spotlight or hunting in the closed season. For deer of all species, as well as sheep and goat families of the Himalayas, were used to be a prescribed warrantable size (horns and antlers) below which animals could not be shot. The aim of every sportsman was to

collect trophies of the chase and to get largest specimen as per the Records Book of Rowland Wards. All deer and antelope species, likely to be below the warrantable size of even those above the water-mark but not worth killing, used to be left. After all, it was the thrill of the chase and selection of record "heads", that mattered to sportsmen and hunters.

If the general consensus be that status quo should remain and that the total ban on hunting by licensed sportsmen, should not be lifted, let me humbly point out that soon there will not be only the tiger, but all wild animals in our fast diminishing forest habitats, which will remain or survive, excepting those to be seen only in zoos and in the Circus.

Last but not the least, I would specially recommend for perusal by the Special Task Force, of the excellent article appearing in the Time of India d. 19.5.2005, "Our Survival is at Stake", by Kamaljit S. Bawa, Prof. Of Biology, University of Massachusetts (SA) every word of which is true and apt.

All said and down, if there is no political will, then the "Save the Tiger" mission assigned to the Special Task Force will be just one more futile exercise like many more major ones e.g. the Bofors Enquiry, which came to nothing, despite nearly 2 decades of unnecessary sensation and approx Rs. 250 crores of needless expenditure of the tax-payers money, down the drain.

The Four Horned Antelopes (Chausinghas), some field tips to foresters for identification.

H.S. Gupta*

INTRODUCTION

The four horned antelope known as chausingha (*tetracerus quadricornis*) is a unique even toed hoofed mammal. The males have four horns. This beautiful small animal is found only in peninsular India. Once upon a time these unique creatures were distributed over a vast area of the country but due to loss and degradation of habitat and hunting now they are confined to small areas of central india. They have been placed in Schedule I of the Wildlife (Protection) act, 1972 of India, for their given importance.

Regarding historical, Kinloch (1885) had observed in his diary while shooting in Chotanagpur, in 1883 "I saw several four horns but as I was hunting Gaour, I would not fire at them."

But for a very long time these little majestic animals have not been reported in Jharkhand and wild lifers have almost excluded Jharkhand from its distribution range, with hardly any authentic record of their present status in the records of forest department. In this background, an attempt was made to find their status in Jharkhand.

A fawn of this species was caught in Ranpuna forest of Ranka West Range of Garhwa South Forest division in Jharkhand in the month of March 1996. This animal was later transferred to Ranchi Zoo. Initially it was confused for a barking deer but the villagers of Ranpura claimed that this animal was of a different species. After that many literatures were consulted to identify that animal i.e. chausingha. Subsequently the need was felt for describing the main identifying features or distinguishing characters of the Chausingha to help the forest staff in the field.

OBJECTIVE AND DETAILS OF THE STUDY:

The main objective of the study is to enlist the prominent distinctive features of Chausinghas(Four horned antelopes) and thereby drawing a conclusion about the identification of this species. Also this article tries to confirm that four horned Antelopes have not become extinct in Jharkhand as is widely believed. Since this animal resembles barking deer (*Muntjac*), the villagers even the foresters confuse it with barking deer. Hence it has been describe here how it can be distinguished from the barking deer.

METHODOLOGY:

The fawn was caught from the forest of Ranpura protected forest, which is towards the north-east of the river Kanhar, separating Chattisgarh and Jharkhand. This is fairly dense mixed forest consisting mainly of Sal with many open patches. Dhardharia nala, a tributary of Kanhar, is a perennial source

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of water for animals. Topography is quite undulating. On the other side of the river, i.e. in Chattisgarh, are the forest of Tula Protected Forest and Chhatwa Protected Forest, which are similar in composition to those in Jharkhand as well as in Chattisgarh where numerous shooting blocks existed, when hunting was legal. The current Working Plan of Garhwa North Forest Division (and adjoining area) enlists in its fauna, some of the endangered animals like Tiger, Panther, Wild dog, Chinkara, Gaur, Crocodile etc. The Garhwa South Division Working plan does not contain the list of fauna but due to the similarity of habitat and other environmental conditions, most of the animals in Garhwa North Division are likely to be in Garhwa South Division also. This point is just mentioned to highlight the rare presence of Chausingha in the area, where it was caught.

In view of the richness in the fauna, Working Plan of Garhwa South and Garhwa North Division proposed a Wildlife sanctuary. But due to the slack attitude of the department, not much has been done in this direction. As a result, the richness of fauna has already suffered to a great deal and is in danger of being lost for ever.

A number of books on the subject [Sahi(1980), Sahay (1984)] were referred to and detailed examination of the creature caught and the barking deer were done in Birsa Zoological Park, Ranchi. After careful analysis and personal discussion with Prof. S.P.Goyal of W.I.I Dehradun it was concluded as following:

To draw important characteristics of Chausingha the following distinctions have been made- Comparison between distinctive characteristics of Chausingha and the animals to be identified was made as following:

Distinctive Characteristics of Chausingha

Animal to be identified

1 Native names	Chausingha, Chowka (Hindi) Bherki Bekra, Jungli Bakra, Bhirkura (Male) Bhir (Female in Gondi), Bhirul (Of Bheels) Kotri (Bastar), Kondguri, (Kannad), Konda-gori, Telugu (Jerdon), Dona (Hindi-Kinloch), Narn Komboomarm (Tamil), Koondo Georee Poki (Kar). Sterndale (1884) also heard these names being given to barking deer (the Rib faced deer or Muntiacus muntjac)	Bhedra, Bhedriin region from where they have been caught
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2	Height	Male 25"(65cm) (Prater)-24-26" Sterndale (1884)-Good buck 26"(Brander)-60cm. (Nair) (Height at shoulder)(Nair)-40-42" (Sterndale) Tail length- 126mm: Nair(1992)	Since the animal caught was an infant, hence it could not be compared
3	Horn	Only male have horns,(four in number) and Females hornless front pair-1"/2.1" sometimes mere bony knobs inner pair 3"-4" Prater (2005)	Female, Hornless
4	Eyes	Bigger and bright as compared to deers of same size. Eye ball is very prominent and seems to be protruding out wards. There is a gland under the eye which outwardly takes the form of a vertical slit of black, nearly hairless skin. Prater (2005)	Much bigger than those of a male barking deer of same size. Eye balls are very prominent and look much similar to those of Nilgai kept in the same enclosure of Zoological Park. There is a black vertical line of hairless skin originating from the eye.
5	Head	The skull has convex aspect	Skull has convex aspect
6	Leg	There is a dark stripe down the front of each leg. It is broader and more defined on the forelegs. There is a pair of well developed glands between the false hooves of the hind legs in both male and females	There is a dark strip down the front of each leg, which is broader and much more prominent on the forelegs. There is a well developed gland of slightly pinkish colour. Hair around this gland are longer and whirling.
7	Colour	Dull red brown, brownish bay dull light brown above and whitish inside the limbs and in the middle of the belly muzzle, edges of ears and fetlocks are dark. Fetlocks some time ringed with light colour. Old bucks are yellowish	Dull light brown above and whitish inside it. Limbs and in the middle of belly. Fetlocks, muzzle and edges of ears are dark.
8	Hair	Coarse and except in summer does not lie on to the skin	Course and erect (Not lying on the skin) as observed in the month of January, a cold month.

9	Group behaviour	Mostly occur singly, more than one are rarely seen, generally a mother with fawn. They are very shy and swift, dashing into dense cover at the first sign of danger. Walk and run in a jerky manner, mating takes place generally in the rainy season and the young are born in the cold months (December-February in this region, Gestation period is about six month)	Caught lonely, no other animals were seen around. The animal was caught at very young age, much likely to be abandoned by her mother as she saw the presence of human beings at close range. The animal was caught in the month of March, so she might have been born in February end or first week of March.
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Conclusion:

From the recorded basic distinctive character of Chausingha and those observed in the animals to be identified, it has been confirmed that the later is none other than a female Chausingha (*Tetracerous quadricornis*).

Tips for field forest staff:

When seen from distance Chausinghas resemble the barking deer in colour but by their jerky manner of walking or running of former and comparatively heavy built of the later, the two can be differentiated.

Field staffs in the region often confuse it with barking deer. So it is pertinent to point out the clear-cut difference between the two. Barking deer have two very prominent ribs in V form on their face and two long pedicles on which the antlers are born in both male and female. There is sharp distinction between colours also. Barking deer are deep chestnut while Chausinghas are light dull brown. Thus any field forester can distinguish Chausinghas from Barking Deer easily.

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Buffaloes in Bilaspur Range

Bulu Imam*

The destruction of the forests north and south of the upper Mahanadi river in what used to be the Bilaspur Range (Formerly in Madhya Pradesh, now in Chhatisgarh) included some of the finest tracts of the buffalo habitat on the Orissa-Chhattisgarh border between Chandrapura and Seria-Palli (Serai-Pujaripalli). It is our interest to enquire into this region and the state of the wild buffalo due to industrialization after 1947 in view of the Hirakud Dam on the Mahanadi river and developments at Chandrapur. In the thirties the area has been described by the Hon. James W. Best in his book *Forest Life in India* (John Murray, London 1935) as a great park filled with wild animals. Coming from Bilaspur once one was over the crest of the valley of the Jonk river one encountered forests of mahua, tendu, bair and teak. Tiger, Spotted deer, and Swamp deer abounded. This was the country of the Maria Gonds and the wild buffalo (*Bubalus bubalis*). Best observed,

"This was the block of forest south of the Mahanadi river included in the Bilaspur forest division of which I was then in charge, and it held buffaloes... I have never seen such a forest in India for animals. It is the ideal Yellowstone National Park for India. It holds every kind of wild animal known in the Central Provinces except elephant." (pp 34-41)

After 1947 and India's Independence the country came under a spate of dam bulding for power and rapid industrialization which literally wiped out the natoon's best forests. The Hirakud dam and Chandrapur electricity plant as well as ancillary industrialization had destroyed these areas. Archaeologically important for early Buddhist sites (Sirpur) and rock art, it is also on the route connecting east India with the Indus valley culture. The weasel-faced bronzes and terracottas of the mother goddess of the Indus are found in Chatisgarh and Midnapore in Bengal and characteristic of the Chandrapur-Gadchiroli area where they are made by the Gadawas. The wild buffalo is a votive deity popularly cast in bronze by these artisans. The Marias and the wild buffaloes faced the cutting down of the forests and industrialization. Today it is important to study the state of the Buffalo from Saria-Palli to Maheshmund in the southwest, along the course of the upper Mahanadi to see if any remain in the wild.

I had written to the Bombay Natural History Society to get reprints of articles on the wild buffalo and they sent me a set from their collections but omitted Best's article quoted from above which is Chapter Two (Buffaloes Again) of his book *Forest Life in India*. I suggest this offprint be included, as well as Best's note on the Wild Buffalo given in his book *Shikar Notes for novices* (The Pioneer Press, Allahabad, 1920, pages 74-86) in which he gives a map of the Central Province showing the range of the Buffalo in Chhatisgarh in 1850, overlapping the range of the Swamp deer. The buffalo he says at one time roamed a line north of Amarkantak along the Maikal Range, and including parts of Mandla and the eastern parts of Balaghat almost upto the Wainaganga river, and south to the eastern parts of Bhandara, and in Drug and Chanda upto the Wainaganga

and along the Ami river in Yeotmal. Forsyth refers to the Buffalo in Amarkantak and in the Lurmi range n Bilaspur upto the turn of the twentieth century. They were found in Best's time in Chichgarh Zemindari during the rainy season and in the caves of Adamgarh in Hoshangabad they are depicted in prehistoric rock paintings. The range of the Buffalo extended as far north as the Narmada river and drawings occur of them in the rock art of Bhimbetka near Bhopal. Rock art drawings appearing like buffalo are found along with rhinoceros in the rock art of Hazaribagh in Jharkhand.

Save the Tiger

Kamal Singh*

There is not a single day when the newspapers fail to publish reports and articles on the decimation of the Tiger, its habitat etc. In fact the subject has become so hackneyed that one hardly gives a second glance.

Surely, those who are avid naturalists and enthusiasts on conservation of our natural resources, wild life in particular (including like-minded members of the media), should not ignore the fate of some of the more endangered species of animals, marine creatures and birds which are also a part of our natural wealth.

Among the endangered animals are the Asiatic Lion, Indian Wild Buffalo, Chinkara (Indian Gazelle) Snow Leopard, Clouded Leopard, and Golden Langur (the last two only found in Assam) and so many others, I daresay.

In the category of Reptiles and Fish, come the Gharial and the Gangetic Dolphin.

As for Birds, the Vulture, so useful to us (and all over the world), are nowadays hardly to be seen anywhere. They are mostly extinct. I have no idea how the Parsi community is faring in Mumbai which leave their dead to be consumed by vultures. Infact, I have never ascertained whether vultures still exist in Mumbai.

Similarly is the position of the common Kite- once a normal sight in any village or town, circling round overhead. Its cousin, the Brahminy Kite (orange body with a pure-white neck and head) can no more be seen. So also the Scavenger Kite (white and cream) which was once a common sight, seen feeding on carrion on the ground (mostly at Municipal dumps) rendering better and more efficient service than our Municipal workers and also its cousin the dusky grey Scavenger Kite which also used to be seen feeding on the ground was quite common.

And what about the Common House Sparrow? At most places they are no more to be seen. They were quite a nuisance in every house at times and specially during the nesting period but now their chirping and chatter and funny antics (being virtually a friendly member of the household), is greatly missed.

The Shah Bulbu, (Paradise Fly Catcher) both male and female, would be seen in summer in practically all parts of India, lightening up the garden with its striking plumage and bringing so much of joy, delight and colour. One hardly sees them nowadays. In Dehra Dun, the small Emerald Dove used to be a common sight, a flash of brilliant colours, flying low and fast through every garden in Dallanwalla. Now we can only see them (that too rarely) in remote forests.

One can go on like this endlessly. But the champions of 'Save the Tiger' campaign or the Forest Department for that matters do not seem to be getting very far in their (no doubt) laudable mission, since the Tiger population is reported to be reducing every year.

Perhaps less of wind and rhetoric and more silent and dedicated efforts by nature-lovers and like-minded NGOS, specially on the protection of environment and habitat, controlling and

How many would have heard of Father Daniel and his silent work in the South Pacific for eradication of Leprosy or for that matter of Baba Amte of Nagpur (who recently passed away) and did so much for uplifting of our poor and downtrodden communities and devoting himself in curing of Leprosy patients?

curing of Leprosy patients?

From the Archives of "Cheetal"

Wildlife Deserts

*P.D. Stracy

The Dehra Dun forests of the U.P. are among the most intensively managed in India. With a network of good forest tracks and the first class roads leading into the town of Dehra Dun, almost everything, even the bark of sal trees, is saleable and nothing which can be sold is ever left behind. The management prescriptions provide for a continuous skimming of the forest – first the main fellings, then the subsidiary fellings and finally the ‘cleanings’ which remove the broken and mis-shapen trees. The cultural Jemadars see to it that there is no waste of saleable material, and the result is very ‘clean’ forest, as Indian forests go.

In fact, sometimes it appeared to me as if they were overdoing the fellings. During the years 1955 to 1960, when I was in charge of the Forest Colleges and used to go out on excursions with the students, I would often pause at spots where there were gaps in the crown and ask our guide why the tree had been removed. Invariably he would say that it was dead or crooked, but the answer never gave me complete satisfaction and I was never free from the uncomfortable feeling that the forests were being squeezed dry. The foresters had never heard of the concept of forest management practices being made to serve the needs of wild life, as I was learning from the books I was then reading for the preparation of my own manual on management of Indian Wild Life. To the Working Plan Officer there was only one aspect of wildlife- and that was the damage aspect; he was expected to record under head ‘injuries to which the crop is liable’, the habits of elephants and bears stripping the bark from the trees, of sambhar browsing plantations, of porcupines, growing seedlings and so on. There was no conception of adjusting his prescriptions slightly so as to assist wildlife: the leaving of some hollow trees to serve as nesting places for owls and similar predators of rodents, the principle of ‘edge effect’ as an encouragement to wildlife abundance, and so on. When I tried to get the Working Plan Conservator to insert something positively helpful to wildlife in the working plan for the Doon forests I met with no success. It was business as usual! The ‘major’ partner, revenue, was very much in the saddle and the ‘minor’ partner, wildlife, was still not considered as worthy of a place in the sun. Even wildlife censuses were yet to come.

Today while browsing through the latest number of ‘Scottish Forestry’ I came across a delightful account of a little girl’s love for wild creatures prevailing over the hard-headedness of a woodland manager and, in a flash back to those days in the Doon forests, I am tempted to give the story here – slightly abridged and a little out of context-in the hope that it will catch the eye of the Indian forester, and in particular those in charge of working plans.

The working plan for the woodlands of a particular estate in Scotland had been drawn up clearly to stress the commercial aspects. Yet there was always a conflict between the forestry requirements and the shooting interests. Came the time for thinning to be done in a particular wood. The market

*This article appeared in Cheetal (Vol. 8, No.1) on page 58-60 in October 1965

for timber was high, the labour force and extraction equipment was on hand, yet the forest manager hesitated. The area had been carefully nursed by the game keeper as a breeding ground for pheasants and the nesting period was on. The coming season's shooting would depend on non-disturbance of the area. True it would be immediately underplanted with rhododendron, berberis etc. to provide cover and winter food for the following season's birds and during the fellings every effort would be made to minimize the disturbance by careful selection of extraction routes and detours as to leave as much area undisturbed as possible. The game keeper reacted in the expected manner when told about it: but the thinning had to be done and the order was given.

The work was well in progress when one morning the game keeper's little daughter was found passionately crying. Patient questioning revealed the cause of her agitation : the felling was going to disturb the nesting of an owl and she was to be deprived of the sight and experience of the fluffy little owl babies unless something could be done to stop it! The forest manager was persuaded to go with her to the spot. He was led to within a few yards of a group of trees and was shown a beautiful tawnly owl, sitting bolt upright in a forked root at the base of tree. It was almost impossible to distinguish the bird, so cleverly had it camouflaged itself by packing the bark of the tree into coloured flakes for about a foot above and to each side of her sitting motionless, the owl was almost impossible of being distinguished from the surrounding bark. Three adjacent trees had been marked for felling and there was no doubt that the nesting place would be ruined.

The hard-headed woods manager looked around and then down at the little girl's tear stained face. He said nothing, but reaching for his knife he cut the necessary "cancel fell" notches on the trees. The next day the fellers entered the area but the owl's house was saved and in due course the little girl saw her baby owls.

As for the woods manager, he duly took part in the shooting. This, of course, was not up to the usual expectations, which was perhaps why when he reached home after the shoot he found, in the boot of his car, not the expected brace of pheasants but a number of billets of wood. 'Just Deserts' perhaps (which was the title of the story) – but it seems more appropriate to call mine 'Wild Life Deserts'.

Character, in the long run, is the decisive factor in the life of an individual and of nations alike.

THEODORE ROOSEVELT

*"Cheetal" quarterly News***Two UK based Institutions take up membership of Wildlife Preservation Society of India**

The growing interest among foreign institutions, students and others continued to add more useful members to the Society. The Birdlife International UK and The Natural History Museum London became our distinguished annual Institutional members during the quarter. One student members, three Institutional Life members, One individual Life member & three annual members were also added during this quarter. The Wildlife Preservation Society of India Dehradun welcomes the following new members

- 1 Sardarkrushi Nagar Danttwada Agricultural University Institutional Life Member
Office of the Accounts Officer cum comptroller
Sardarkrushi Nagar- 385506
Distt. Banaskantha Gujrat
2. Conservator of Forests Institutional Life Member
Yamuna Circle,
87, Rajpur Road
Dehradun 248001 Uttrakhand
3. Conservator of Forests Institutional Life Member
Siwalik Circle, Uttrakhand
Ansari Marg
Dehradun 248001 Uttrakhand
4. Kunwar Vikram Jeet Singh Life Member
Director
C/o Mud Fort Kuchesar
Village & P.O. Kuchesar
District Bulandshar - 245402 U.P.
5. Birdlife International Institutional Annual Member
Well brook court
Girton Road
Cambride C.B. 3 ONA
United Kingdom

- | | | |
|-----|--|-----------------------------|
| 6. | The Natural History Museum
Cromwell Road
London - SW7 5 BD
United Kingdom | Institutional Annual Member |
| 7. | Sri Saurabh Gupta
Wildlife Researcher
13/69 Tilak Nagar
Auraiya U.P. 206122 | Annual Member |
| 8. | Miss Priya Bhagat
27/2, Teg Bahadur Road
4-Block Dalanwala
Dehradun 248001 Uttarakhand | Student Member |
| 9. | Dr. Pemola Devi
Lecturer
577-A Dakra Bazar
Garhi Cantt
Dehradun 248003 Uttarakhand | Annual Member |
| 10. | Poonam P. Semwal
Department of Zoology
A-Block, Saraswati Vihar
Ajab pur, Khurd
Dehradun 248001 Uttarakhand. | Annual Member |

Following annual members of the society have opted to become life members
The following annual members are hereby converted to Life member noted against each.

- | | | |
|----|---|----------------------------|
| 1. | Kr Atul Raj Singh
Village & P.O. Jalalpur
Distt Bujnore - 246725 U.P. | Life Member
(2000-2001) |
| 2. | Sri Pravin Singh Rawat
25/2 E.C. Road
Dehradun 248001 Uttarakhand | Life Member
(2000-2001) |

- | | | |
|----|--|----------------------------|
| 3. | Sri C.P. Naithani, IFS (Retd.)
19/1 Rajendra Nagar Street No. 1
Dehradun 248001 Uttarakhand | Life Member
(2001-2002) |
| 4. | Himalayan Adventure Institute
Kempty Fall
H.Q. Madhu Cottage, Library Road
Mussoorie 248179 Uttarakhand | Life Member
(2001-2002) |
| 5. | Sri Sanjai Raturi
153, Vasant Vihar, Phase I
Dehradun 248006 Uttarakhand | Life Member
(2006-2007) |
| 6. | Sri S.P. Singh
9A Sewak Ashram Road
Dehradun 248001 Uttarakhand | Life Member
(2006-2007) |

10 more years to save Earth (Temperatures on Hold Till 2020, Says A New Study)

Nitin Sethi

While humans have been heedless in making global warming a reality, nature has given Earth a break. Nations and leaders may get a rare chance to sink their differences and fix climate change as latest research shows that natural phenomena could keep Earth's temperatures in check for the next 10 years.

The 10-year window, beginning 2010, will not last for ever. And from 2020 onwards, temperatures will begin to rise again. But till then, phenomena like cooler North Atlantic waters could counter heating up of Earth due to greenhouse gas emissions as has been predicted by UN's Intergovernmental Panel on Climate change (IPCC). This could mean temperatures would continue to be at existing levels.

The heartening news, which could mean that the world has moved a step or two away from the brink of climate change, has been published in the latest issue of Nature. The research published in the reputed journal says Earth could benefit from a phase where certain phenomena cancel out the effects of greenhouse gases.

IPCC in its fourth assessment report had warned that at current rates of greenhouse gas emissions from the rich and the developing worlds, the global climate could warm by 0.2 degree

Celsius in a decade, raising the sea level and leading to dramatic consequences for coastal societies in particular.

It's known that though increasing greenhouse gas emissions push temperatures upwards, the warming curve is not smooth – there would be periods when processes aid the heating, while the opposite happens during other periods. Now, research carried out by scientists from Leibniz Institute of Marine Sciences and Max Plank Institute of Meteorology, both based in Germany, has shown that the next decade is going to be one such period when natural occurrences negate the effect of increasing emissions and keep global climate cooler than what was forecast earlier.

Soruce - Times of India, 3 May 2008

Pollution 'wiping our 3 species every hour'

London: About six waves of massive extinction are known in the history of the Earth, the last one wiped out dinosaurs 65 million years ago. Now, add one more to the list – pollution, but this has no natural causes.

A new report on the destruction of natural habitats has claimed that pollution, which is man made and rampant, is actually eliminating three species every hour, British tabloid the Sun reported

What's shocking is that the extinction rate has not been seen since the dinosaurs vanished 65 million years back, according to the report of the World Conservation Union. One in four mammals are on the endangered list, including orangutans, chimpanzees and elephants. The list also includes one in eight bird types, a third of amphibians and 70% of plant life.

The report which was read out to officials from 191 countries at a conference held in Germany on Monday, has claimed that failure to act to curb greenhouse gases and climate change could threaten food supplies and even "destroy the foundation of human life".

Last year, the United Nations had warned that human activities would wipe out animal or plant species every hour and called on the world to do more to slow the worst spate of extinctions since the dinosaurs by 2010.

"Biodiversity is being lost at an un-precedented rate. The global response to these challenges needs to move much more rapidly, and with more determination at all levels," UN secretary general Ban Ki-Moon had said in a statement.

Meanwhile, Ahmed Djoghlaif, the executive secretary of the Convention on Biological Diversity, said maintaining and promoting diversity was crucial. "Conservation of biodiversity is not about keeping one species away from another."

Source - Times of India, 21 May 2008

Survival Strategies

Sushanta Talukdar

SANTIRAM CHETRI'S eyes were red and swollen from lack of sleep the previous night. Ever since the flood waters of the Brahmaputra entered the Kaziranga National Park in the first week of

September, Chetri, who is the forester of the Bagari range of the national park, and other officials and staff of this World Heritage Site could hardly sleep for three hours in the night for days together. When darkness descends on flooded Kaziranga, the 45-kilometre stretch National Highway 37 between Jakhalabandha in central Assam's Nagaon district and Bokakhat in upper Assam's Golaghat district that passes through the park witnesses a unique battle of life and death.

While animals flee their flooded habitat to take shelter on the high lands across the national highway, park officials and staff try to save them from being knocked down by speeding vehicles.

The Kaziranga National Park, famous for the one horned rhinoceros, is located in the flood plains of the Brahmaputra. The entire area has been formed by the silt carried by the different river systems flowing through it. Every year, flood waters from the Brahmaputra enter the park from the western boundary through the Diphlu and Moridiphlu rivers.

This year's flood submerged more than 60% of the park and killed 13 animals, including three rhinos. Eight hog deer, a swamp deer and a monitor lizard were knocked down by vehicles; two rhino calves were drowned and another calf, which had got separated from its mother, was eaten by a tiger. In 1988, floods in Kaziranga killed 1,203 animals, including 38 rhinos; in 1998, the casualty was 652, including 39 rhinos; in 2004 it was 98, including 11 rhinos. The zeal of the park authorities and staff to conserve Kaziranga's wildlife has helped reduce the casualties this time.

The flood caused by the Brahmaputra in another important rhino land, the Pabitora Wildlife Sanctuary in central Assam's Morigaon district, was equally taxing for its officials and staff; 90 percent of the sanctuary got flooded and the animals were forced to take shelter on an artificial highland. Range Officer Mukul Tamuly said two rhino calves drowned after they got caught in the thick of water hyacinth. With five rhinos for every square kilometer of the sanctuary, Pabitora has the highest population density of rhinos in the world.

The Director of the Kaziranga park, S.N Buragohain, told *Frontline* that the annual floods had both positive and negative effects on the ecosystem and management of the national park. To counter the negative impact, the park authorities introduced round the clock patrolling along NH-37 from Bokakhat to Jakhalabandha during the entire flood period, improved the barriers and rumble strips and erected them in strategic locations to reduce chances of animals being knocked down. On an experimental basis, the park authorities introduced a time card for vehicles plying on this 45-km stretch and this produced positive results.

Over the years, tackling floods and protecting and conserving animals and their habitats have become a challenging task for the KNP authorities because of constraints such as shortage of staff and funds. The sanctioned staff strength is 504, but the actual strength is short by 78. And this staff strength was sanctioned when Kaziranga's area was 430 sq km. Now the park area has increased to 940 sq km. Against an annual requirement of Rs 1.5 crore (excluding salaries), the park gets less than Rs. 50 lakh. It has a fleet of 23 vehicles and eight motorized boats. Of these, six vehicles are lying idle. The park requires at least Rs. 25 lakh to keep the fleet running, which is essential for better management. Against this, it gets only Rs. 5 Lakh, which is provided by Oil India Limited.

Domesticated elephants numbering 49, including five calves, serve as an important means of transport throughout the year. They are also an important source of revenue during the tourist season. But there are only 26 mahouts. Officials and other staff are not paid travelling or dearness allowance, which restricts their movement.

As the animal start migrating when the floods come, there surface problems such as the movement of large masses of water hyacinth along the flowing water and their getting stuck under bridges and culverts. This leads to damage to these structures and the trapping of animals in the water hyacinth, sometimes leading to death or injury.

During floods the favourite fodder grasses of the animals become scarce and they have to subsist on water hyacinth, coarse grassed and other species of undergrowth in the forest. There is only one point at Haldibari where the boundary of the park touches the forest of the Karbi Anglong hills and provides a convenient corridor for migrating animals during floods.

A number of water bodies inside the park have shrunk owing to siltation caused by floods. The proliferation of weeds such as Mikenia, Mimosa and Eichhornia causes ecological degradation of the habitat. Serious efforts to eradicate them have been made in the recent past.

Erosion has also caused a serious loss of landmass in the park. Every year large chunks of land from the northern boundary are washed away by the Brahmaputra. The points of erosion go on changing according to the change of course of the river. Erosion has reduced the present area of the park to 40,790 ha as against the notified area of 42,993 ha.

Dibya Dhar Gogoi, Divisional Forest Officer, Kaziranga, says Kaziranga is not just about poaching of rhinos or anti-poaching measures to protect them. It involves larger management strategies like habitat management and the tackling of natural calamities, which are determined by sustained research on habitat changes, animal behavior and changes in the ecosystem.

"it is a classic example of how human intervention saved rhinos from naturally getting extinct. Had there been no human interventions, then habitat destruction by nature alone, like invasion of grassland by weeds, would have made the rhino and other animals extinct," he adds.

The estimated number of rhinos grew from 40 in 1911 to 366 in 1966, and 1,552 in 1999, and 1,855 in 2006. This is billed as the century's greatest conservation success story in the world. The challenge before the park authorities now is to sustain this success by effectively tackling floods and erosion, preventing poaching, and managing the habitats and the ever-increasing tourist inflow.

Source - Frontline, 10 October 2008

Tiger relocation to Sariska may take longer

by Anido Dey

Jaipur: the proposal for relocation of a third tiger, this time a female, from the Ranthambore National Park to Sariska is yet to be implemented as directives for the needful have so far not been issued.

Though officials from the National Tiger Conservation Authority (NTCA), the Wildlife Institute of India (WII) and the state forest department say the relocation is due any time now, each is awaiting orders from the other.

While the state forest department officials are waiting for the NTCA to throw more light or, better still, do away with a clause that makes it mandatory for the WII to tranquillize only transient tigers from Ranthambore, other agencies involved in the relocation think that the onus lies with the state forest department. With chief minister Ashok Gehlot keeping this portfolio to himself, the orders will have to come from him first. Sources in the state forest department, explaining the long wait for the much-hyped relocation of at least six tigers that were slated to be moved to Sariska with in last year, said the initial hitch came from the NTCA, which sanctioned the Rs 1.5 crore project order to the WII. The order stipulated that only tigers caught within the Ranthambore sanctuary or its reserve area could be relocated and not those from within the national park.

The directives threw a spanner in the work of the WII. These restrictions made the job cumbersome as one cannot not be sure as to whether a tiger is actually inside the national park or not. And a slight mistake in the location of the tiger could bring in the ire of the higher authorities, say officials involved in relocation of tigers.

The Ranthambore tiger reserve comprises the Ranthambore National Park, Keola Devi and Sawai Mansingh Sanctuary. The national park comprises a rich green covering and thus has more tigers but NTCA was of the opinion that tampering with the tiger populace there could trigger an unrest among the big cat population there. However, with the WII writing for a clarification on the orders of the NTCA, according to state forest authorities changed it to tranquillizing only transient tigers from within the sanctuary area.

But even that is difficult. It must be understood that whenever a tiger is removed from its territory even from within the forest that space is automatically taken by another tiger in due course and not left vacant, said officials of the forest department. But Rajesh Gopal, director, NTCA had his reasons. "We don't have any such orders that restrict the catching of tiger from the national park area of Ranthambore. All that we are insisting upon is that they catch a tiger that is migrating to other areas for eventually these tigers are likely to get killed. And so it is better to relocate them. Currently, there are two tigers that have been straying off to the Keola Devi and the Sawai Man Singh sanctuaries, he said, adding that the relocation can take place any time now.

Even officials of the WII denied that directives of the NTCA are acting as a hindrance. "If at first it was the elections, now with the chief minister himself looking after the forest department we are just awaiting orders from him. The moment it comes, we will relocate the tiger," the official said. However, he added that catching a tiger in the reserve area was more difficult. But with the mating season of the tigers running out (it lasts till February), it remains to be seen whether the motive for the relocation, that of re-establishing the tiger populace at Sariska, can be met.

Source - Times of India, 19 Jan 2009

Going Green

5th JUNE IS CELEBRATED AS EARTH DAY. FACING CLIMATE CHANGE, WE CAN NOT TAKE THE ENVIRONMENT FOR GRANTED

Aradhana Singh

Everywhere you turn you probably see and hear the following phrases: "go green," "eco-friendly," and "environmentally conscious." The push, to reduce pollution and help save the environment is based on evidence that the decisions we have made, and continue to make, are damaging the air we breathe and the land we live on. You can do your bit for the environment and contribute to a greener planet. These tips and tricks are part of the drive to encourage people to adopt more environmentally friendly behavior. Many of you will already be doing your bit, whether it is recycling more, driving less or using energy efficient light bulbs. But we can all do that little bit more. Here are some great ways to "go green."

Day by day

- Save water by decreasing your shower time - better yet, take a bath, which uses less water than a shower.
- Get in the habit of brushing your teeth with the water off, and encourage your children to do so, as well.
- Recycle – junk mail, cell phones, paper products, plastic bags, and more.
- Switch from paper and plastic bags to reusable bags.
- Forget the electric or gas dryer, and hang dry your clothing.
- Opt for direct deposit, online banking, and paperless statements to reduce your paper usage.
- Use recyclable and refillable beverage containers that you can fill with filtered water instead of bottled water.
- Unplug all of your appliances when you leave the house to save energy.
- Take public transportation or walk.
- Use rechargeable batteries.
- If you are in the market for a new car, purchase a hybrid model.
- Select products made of recyclable materials.
- Buy groceries in bulk, as it reduces packaging and the number of trips you take to the grocer.
- If possible, buy items that use less packaging.
- Purchase locally produced food at farmer's markets and even road side stands.
- Purchase fresh fruits and vegetables, instead of jars, canned, or frozen.
- Follow the celebrity trend and use cloth diapers, as opposed to disposable diapers, which cause landfill waste.

Recycling and reusing – It is important to “reuse” items wisely – reusing packing peanuts to pack an item is by far the best way to use them. Recycling them, if it is available, would be the next best thing. Turning them into an art project would be the least effective, and eventually they will end up in the landfill. Now many of us love art projects, and would be using materials to make crafts anyway, and so using an item that would otherwise be discarded may still be a sensible choice, it depends on the project.

Giving things in good condition that you no longer need to charity is another good way to reuse things like outgrown clothing or toys. Reusing is often the best way to save resources. This is something to consider year round, not just around the Earth day.

Shop wisely to save resources – Buy containers that can be easily recycled or reused. Also, carry your own reusable bag instead of taking a plastic bag.

Plant a tree – Wangari Maathai, winner of Nobel Peace Prize 2004 says. “By starting with the simple step of digging a hole and planting a tree, we plant hope for ourselves and for future generations. The planting of trees is the planting of ideas. A tree brings transformation.” Trees also help reinforce our connection with nature, a connection Maathai believes is lost as countries develop.

Clean up and beautify - Organize a project to clean up or beautify some area in your town. Make sure to have a long term plan to keep it clean and beautiful.

Youth Action: climate change represents the biggest challenge and opportunity for a generation. The youth of today will inherit a planet unlike any other in the past, and they have the unique opportunity to fundamentally transform the world for the better. Whether it's learning about renewable energy, biking to school or simply voting, you can take action NOW to protect the planet.

The environment is important to us individually and collectively, each of us should be able to make a difference. Even the activities that we do as an individual can make a lot of difference. Everyone can get involved individuals, institutions, corporations and governments. Everyone can make a difference. So, wherever you are and whoever you are take some action and support initiatives that can make a difference.

Source - Times of India, 8 June 2008

"Cheetal" Young Readers Section

State Bird of U.P. : Now or Never

Saurabh Gupta

On account of the excess of the population of Sarus crane, the district Auraiya and its nearby area has made an identity in the whole world. The population of Sarus crane is now on the edge of extinction. According to the survey conducted in 2002, about 30% population of the total world population of Sarus Crane exists in Etawah, Mainpuri, Auraiya, Kanpur and the surrounding villages. This happens due to the presence of excess number of wetlands in these places. But in the new census, we find a decrease in its population.

Besides lack of rain, poor number of ponds, shrinking lakes and marshy lands, the increasing demands on the land made by man has affected the number of cranes. They are also badly affected by disbalancing of nature. Their life has been affected severely by the lack of rainfall from the last 3 years. On account of sharply decreasing population of Sarus crane day by day, the Govt. of India has announced them as endangered birds and to protect them has kept in schedule IV of Wild Life Protection Act, 1972. According to this law, it is a punishable crime to kill the bird, to hunt, to catch and damage eggs and nests in any form.

The pressure of increasing human population, increasing temperature of Earth and the contamination of water bodies by insecticides present in agricultural residues are some of the reasons behind the decreasing population of the Sarus Crane.

Another reason of the decreasing population of the Sarus Crane in this area is the coming out of poisonous gases (and contamination of environment from these gases and water residues) from the Pata Petrochemical Plant and NTPC Gas Power Station situated in District Auraiya. Plants and animals are badly affected by this pollution.

Also this bird is not untouched by the effect of the changing environment. Due to the excessive use of harmful chemicals in agriculture, small insects and invertebrates die which are the main source of diet of Sarus crane. Thus these are growing situations due to which these birds are dying of hunger. The breeding of these birds is thus effected by the shortage of food and shelter. Killing these birds by man for protecting their crops, hunting them for food and selling them for entertainment in the markets is a great danger to extinction of these birds.

Specialists have announced modified crops, which are again threat to these birds. The weeds of near by areas will decrease due to the agriculture of genetically modified crops. As these birds use these weeds for making their nests, the lack of weeds will also help to decrease their population. To save the Sarus crane and other birds it is necessary that the agriculture department forcefully checks banned use of harmful insecticides. So that nobody uses them. Sarus crane has an important role in the balance of environment.

To protect the crane, places where many different kinds of aquatic animals and plants develop must also be protected. It is essential to save these birds from destruction.

New modern technologies in agriculture are also a huge threat. To save the crane, research, public consciousness and society's contribution is very necessary.

In places where big wetlands are present, the crane can be seen in flocks. Big flocks of crane can be seen in the Vaishali pond of Achhaldia, a block of Auraiya district and in a flock there may be 15 to 60 members. We found during our census that the people, who drop crops of chestnut in ponds, destroyed the eggs and nests of the crane because during the search for food, the crane damages the chestnut by drawing it out. Besides water from ponds is also used for irrigation by villagers. This is why the cranes are compelled to leave these places. In the fields, their eggs are destroyed by dogs, jackals, crows and by the local children.

Shortage of nesting sites has also been seen. This is due to the decrease in the population of Sarus crane. On account of the disbalance of environment, lack of the suitable places of shelter, and disturbance created by man, the breeding of Sarus crane is again going to be badly affected.

The death of cranes due to electric wires is also one of the causes of their destruction. Another reason for their death is the presence of excess amount of poisonous insecticides in their body, which is present in the form of their food, (crops swallowed by them).

The anthropogenic effect on the environment of the whole world has become another threat to these birds. This situation is definitely worthy of anxiety. If soon we don't take any suitable steps towards their conservation, the forthcoming generations will not be able to see the glimpse of the divine in the form of Sarus crane.



Insects in our lives

Insects inhabited the earth long before humans did. They were among the first air-breathing land animals. Even today, insects are all around us. We see them crawling, running, flying or swarming. We hear them buzzing, humming, droning or chirping. We know some of them – grasshoppers, butterflies, moths, bees and wasps. While we enjoy and appreciate the beauty of some, we tend most of the time, to consider insects as pests that sting or bite, spread disease, destroy our property or crops, and generally make a nuisance of themselves. These insects, however, make up a very tiny portion of the insect world. And our common notions about insects are far removed from the vital role that insects play, not just in the lives of human beings, but in the balance of nature. Let us see how.

Pollination: Insects are the key agents for pollination for most orchard fruits, many vegetables, field crops like legumes, and including cash crops like cotton, oilseeds, coffee and tobacco and fodder crops. Insects visit flowers to collect nectar and pollen for their food, and but in the process they transfer pollen from one flower to another, thereby making fertilization possible. Although this sounds small, the implications are enormous. Infact, without insects there would be no flowers, no seeds, no fruits, no forests. We could not raise crops, not get cloth for clothes. So while we admire flowers and butter flies for their beauty, we do not always realize that their role in our lives is much more than giving us aesthetic pleasure.

Products: Insects provide us with a number of products, many of which have high commercial value. Honey bees provide honey, and also beeswax which is used in the manufacture of candles, sealing wax, and some polishes and oils. The silkworm and tusser silkmoths have been used to produce silk since ancient times. Secretions of scale insect occurring on fig and banyan trees are used in the making of shellac and varnish. Another type of scale insect provides a red dye, cochineal, which is used as food colouring.

Food: While insects are the main food source of innumerable other insects, birds, fish and even mammals, they have also provided humans with a food source. Insects are nutritious as they are very rich in protein and fat. In several parts of the world people eat insects as part of their diet or have used insects as food source in times of famine. Some fry or roast grasshoppers and maggots, other dry and grind up beetle grubs or locusts into flour. Juicy Mopani moth caterpillars are cooked like French fries and eaten with chilli sauce in South Africa; roasted wasps and water bugs make snacks in Thailand. In India, some tribes in the North east collect and roast water beetles and crickets. Some tribes relish tender bee larvae along with the honey. The Irula tribe in South India are experts at locating the fat termite queens that they relish. As the world's population increases, people are beginning to seriously consider insects as a nutritious food source for the future.

Farmers' Friends: Insects play an important role as natural weed controllers. Weed-eating insects are essential to prevent fields from being overrun by weeds. A classic example of this role was when, around the beginning of the 20th century, the prickly pear cactus which was originally used to fence fields, began to over run the land, making cultivation difficult. The mealy bug, which fed on cactus was brought in from South America. The most introduction of this bug led to almost total eradication of the weed and helped to clear the fields.

Some insects also play a very important role in controlling harmful insects which have reached pest status-either for agriculture, or for human health. Common predators like praying mantids, dragonflies and others, systematically hunt for, and destroy, thousands of grasshoppers, mosquitoes, flies, crickets, aphids and other insect "pests".

These predatory and parasitic insects if correctly introduced and used, can help control devastation by agricultural pests, more effectively and with less long-term harm to health and environment.

Cleaning Crews: Although largely unnoticed, insects play a vital role as scavengers and cleaners of waste. Carrion-eating insects such as carrion beetles and some other beetles, blo-flies, etc. are quick to reach dead animals and to eat away the flesh. Other insects feed on dead leaves, tree trunks and other organic matter. Both these help to quicken the process of breakdown of dead organic matter and return the nutrients to the soil.

Still other insects feed on animal dung, thereby playing an important role in keeping the surroundings clean. This vital role is not realized till it is missing. One classic example occurred in Australia. When cattle were first introduced in Australia, the dung began to accumulate until it affected the productivity of the soil. This is because the native beetle species fed only on kangaroo droppings that they were used to. Eventually African dung beetle were introduced to feed on the cattle dung and clear the soil.

Medical and Acientific Research: for centuries some insects have been used in medical treatment and surgery. Maggots of certain flies were used to hasten healing of wounds during World War I, bee venom is used to treat arthritis. Maggots of some flies are now successfully used to treat festering wounds of diabetics. The fruit fly has been used in experiments to study the mechanism of heredity.

Aesthetic Pleasure: The beauty of insects has inspired artists, writers and jewellers for centuries. Patterns and colours of insects have been reproduced in motifs and designs for jewellery, textiles, and ornamentation of buildings.

In ancient Greece and modern-day China and Japan crickets are kept in cages, as birds are, for their song, and fireflies are kept in special lanterns. In China, people bet on matches between crickets.

Insects as Pests: There are the numerous but often less noticed contributions of insects, not only to human beings, but to the balance of nature as a whole. However, it is not the useful, but rather the pest role of insects that comes to the attention of humans.

Crop Pests: Insect can cause injury to crops by feeding on them, laying their eggs on them, or by transmitting plant diseases. Insects can damage plants by feeding on leaves, sucking the sap, or boring tunnels in different parts of plants, and laying eggs in various plant parts. Some insects inject a chemical into the plant, causing abnormal growths called galls. Insects are also known to transmit a number of plant diseases which may wipe out entire standing crops, and cause great losses in agriculture.

Stored Product Pests: Even after a crop has been harvested and stored, it can be damaged by insect pests that feed on stored grain. A large proportion of commercially stored grain is damaged by such pests. Other insects cause considerable damage to stored clothes, books, papers, furniture and even house structures.

Transmitters of Disease: Perhaps the one aspect of insects that affects the ordinary person is their role as transmitters of the microorganisms that cause malaria, yello fever, plague, typhus and sleeping sickness. These "villains" that include mosquitoes, fleas, lice and flies have perhaps been responsible for more human fatalities than major wars. Domestic animals are also put to discomfort by parasites such as fleas, lice, bugs, flies etc. despite all this, the total loss due to insect damage to crops, livestock, raw materials and health is still much smaller as compared to the great contribution of insects to creating and maintain the balance in the environment. Humans depend far more on insects than insects do on humans. It is said that while the extinction of humans may not affect insects, the extinction of insects would probably lead to extinction of human life.

Family Life of Wild Elephants

The expression 'mothers know best' is very appropriate for elephant society as a family herd of elephants is led by the oldest female- the matriarch. A matriarch's herd consists of her sisters, daughters, female cousins, and a number of juvenile and adolescent males and females. Up to four generations of females may live together. The position of the matriarch in the herd is always respected, even when she grows old and weak.

Leader of the Herd

Most elephants spend a large part of their lives in a strongly female-centered world. Within a family unit, individuals have specific roles to perform. The role of the matriarch, the oldest females, is of great importance for the success of a family. She influences the movements and stability of the family herd. She is responsible for the safety of the herd and for providing enough food and water. It is she who has to decide how far and in which direction the herd should go in their constant search for new pastures. If families are headed by young cows, then these family units might fragment, as these cows are less experienced and might have difficulty finding food and water during times of stress.

A large family herd consists of small sub-groups of 3 to 6 elephants, although there are consistent associations between 10 to 20 individuals. All members of the family unit spend 70 to 90 percent of their time together. Sometimes, the herd might split apart and then rejoin over the course of several hours or days. This depends on various factors such as availability of food and water, and activities of members of the family herd. During times of stress such as a drought or during dry seasons of the year, a mother and her child might move out the herd and feed independently. Thus the family herd may fragment temporarily.

Giving Birth

Female elephants reach sexual maturity around the age of 10 to 15 years. At this stage, they mate and stay in their mother's herd to give birth to their child.

The oestrous cycle lasts for approximately four months, though the female is receptive only for a few days. In a population where there are many bulls, a bull will have to fight to have access to a female oestrus, as many bulls may be competing for her. When male locates a female in oestrus, he usually mates with her and remains with her throughout her oestrus period. During this period, he protects the female and guards her from other males. The gestation period is long and lasts for about 18 to 22 months. The natural bulk of the female helps disguise the pregnancy.

A female may start calving at the age of 18 to 20 years. During her entire lifetime, she may deliver 10 to 12 calves, the time interval between two calves being 4 to 5 years. However this will depend on the quality of the habitat. The gap between two offspring may get prolonged under stressed conditions.

Arrival of the Baby

Even before the arrival of a baby elephant in the world, its imminent coming is known to the entire herd of females and young. The birth of a baby is a momentous occasion for the elephant family. The female who is nearing the end of pregnancy becomes the focus of attention and her closest relatives protect her from possible dangers.

Each female is highly individualistic when it comes to giving birth. Some cows leave the family group when about to give birth, as they may choose to give birth at a sheltered spot. Some others deliver the child in the herd. When the elephant child is born with the family group around, its arrival is accompanied with excited trumpeting.

Birthday Facts

At birth, the elephant calf weighs more than an average adult human! Female elephant babies weigh about 90 to 100kg, while male babies tend to be heavier, and weigh up to 120 kg. When born, a baby elephant have relatively sort trunks as compared to their body size. When born, a baby elephant stands approximately 1m at its shoulder. It might stand on its feet within a few hours after birth, though it takes at least 48 hours before the young calf is strong enough to follow a slow moving herd.

For years after the birth of the calf, the attention of the herd towards the mother and the calf is not slackened, for it is during early infancy that the calf is most vulnerable to predators, since it has no means of self defense. Tigers and crocodiles are threat to Asian elephant calves, while African elephant calves are mainly in danger from lions.

Calves grow quickly and by the time they are 5 to 6 years old they may weigh nearly a tone. Elephants are unusual in the sense that they continue to grow throughout, till they attain a very old age.

Bringing Up Baby

The calf's survival depends upon the care taken by the mother and its own appreciation of the world around it. The calf's natural curiosity for exploring and testing its surroundings is an essential part of learning. This must be carefully held in check by the more experienced and knowledgeable elephants around it. Baby elephants are vulnerable to all sorts of dangers, from getting their feet stuck in a muddy river bank to an attack by a predator. But in a caring and sharing elephant society, there is always an aunt or big sister to offer a helping trunk if need be.

Inexperienced cows are at times less successful at rearing their calves as compared to older cows. One of the most essential functions of a family herd is to act as a defensive unit for rearing calves. Younger cows, especially juveniles and adolescents, before they have their own calves, are the main caretakers of new calves born in the herd. These females are called 'allomothers' and are always there to protect or assist a calf in trouble. All cows cooperate to assist the calf in moving and foraging. They also protect it from threats and provide important social experiences. It is seen that the number of allomothers in a family affects calf survival. The more the allomothers there are, the higher is the chance of survival of calves. This is irrespective of the overall size of the family.

Growing Up

Baby elephants have a lot to learn before they become adults. They are very curious about their surroundings and want to investigate everything with their trunks. But unfortunately, at a young age, elephants have little coordination of their trunks and have no idea how to control its trunk.

Elephant calves remain dependent on their mother and family members for many years. During the first year, they spend most of their time relatively close to their mother, beginning to become more independent during the next year. Calves suckle for 3 to 5 years. For the first two years they get the bulk of their nutrition from their mother's milk. Within the first 3 to 4 months, elephant babies do start tasting solid food, but at this age, due to lack of coordination and trunk strength, they are not very efficient in gathering their own food. So they tend to forage on grasses. At times they might take twigs and stems from their mother's or a relative's mouth.

An elephant calf that is turning to food from mother's milk eats some quantities of dung of an adult elephant so that it is 'infected' with the right kind of microbes that are required for digestion of cellulose.

Elephant calves spend more than 5 percent of their time in play. They like to play with objects, tossing and retrieving them, or rolling them over the ground. Elephant play is frequent and often complex and appears to serve several functions. It helps the calf gain experience with objects, develop locomotor skills and assess the abilities of other calves. Hence play is not only fun but is also important for developing skills, strength and inculcating knowledge.

While maturing physically, calves engage in any social interactions. During their early period of up to 5 years, calves acquire a variety of survival as well as social skills. They also learn about food plants, locations of food and water, and about other members of their family, from their elders.

Young Bulls

Born in a female world, male elephants ultimately strike out on their own. From their early childhood, they are more independent of their mothers than female calves, and often move away from them to feed and play. Around the age of 6 they may wander out of their family herd and may associate with other elephant families for short periods. This trend usually accelerates by the age of 14 or 15. The males now start spending about 80 percent of their time away from their families and finally move out of the family herd.

Young bulls sometimes have to face aggression from cows. Such a situation might occur when these young bulls are associated with other family groups or when a male calf has lost his mother.

Life as a Bull

The life of a bull is very different from that of a cow. It is the large energy requirement of males as compared to females that forces them to leave their family herd. The large body size of males also helps them to withstand adverse conditions and thus explore and exploit new areas at comparatively lower risk. By their mid-teens, male elephants leave their family herds and either go off alone, or join other bachelor herds.

Bulls show very little interest in their offspring. They usually keep out of the family herd and concentrate mainly on maintaining their status among the males in their population.

Moving Out

Adult bulls tend to be solitary. They may associate with other bulls in small and relatively unstable groups. Young bulls leave the family group between the ages of 10 and 15 years and form their own home range. This process is referred to as dispersal and is an important phenomenon in elephant populations. The main cause of dispersal is competition for resources between males and females. But the benefit of such a process is that it helps to avoid inbreeding and prevents the males coming contact with their female relatives. Hence, this helps in maintaining genetic variability in elephant populations. This is one reason that safe land passages or corridors between different sub-populations of elephants are so vital.

When males move out of their mother's homes, they test the strength of other males by play fighting. These fights help in the establishment of new dominance hierarchies in the male populations, without the risk of serious injury. They also play an important role in the development of the male's social organization.

Adult male elephants show great interest in the urine of female elephants. The scent of urine helps a male to check whether a female is in oestrous and whether she is ready to mate or not. This is because the scent of urine of a female in oestrous is different from that when she is in a normal state.

Keeping in Touch

Elephants communicate with each other in many ways and use all their senses. They do not rely on their eyes as much as humans do, though visual signals are important. Elephants have a good sense of smell and this helps them to sense another elephant's health and sexual condition. Elephants also communicate through touch. Touch helps elephants reassure each other. A baby elephant feels protected and reassured when touched by its mother.

Long Distance Trunk Calls

Elephants make a variety of sounds to communicate different messages. The main way in which elephants communicate over long distances is through low frequency sound i.e., infrasound, (sounds of frequencies of about 4 to 15 Hz). This frequency is very low and cannot be heard by the human ear, which can hear sounds of 20 to 30 Hz and above. The low frequency sounds help elephants communicate messages to their friends and relatives who are out of sight or smell. It helps them communicate their location, identity and activity of other elephants. It also helps them alert other elephants in case of danger.

Trunk Greetings

As human beings, elephants too go through an elaborate greeting ceremony when they meet their friends and relatives. They express their happiness by entwining their trunks, sniffing each other's

faces and bodies, and sampling breath and saliva while responding to a greeting. This allows an exchange of smell, touch, taste as well as sound.

Reunion

Elephants reaffirm their contact and relationships with their friends and relatives whenever they meet. This is irrespective of whether the period of separation is 20 minutes or several days. When elephants reunite after separation, they usually approach each other running, defecating, and urinating, as well as trumpeting. They often touch each other's mouth, faces, genitals, tusks and rub each other's head and bodies. Elephant greetings are generally quite noisy, with loud vocalizations.

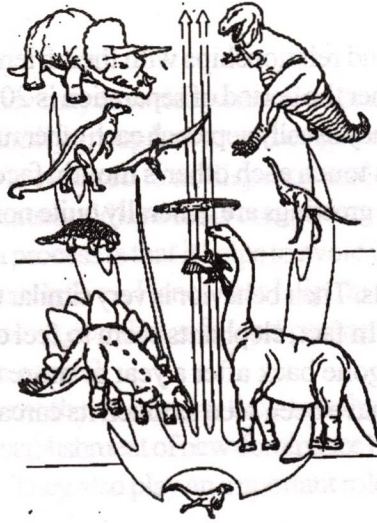
Sense of Death

Elephants are very sensitive animals. Their behavior is very similar to that of human beings and they show very strong emotional ties. In fact, elephants seem to feel death the way we do. There are instances where elephants have gone back after a year or more to places where they had left a dead family member behind and have been seen to touch its carcass, and also touch and smell its bones that were left behind.

I count him braver who overcomes his desires than one who conquers his enemies, for the hardest victory is over self.

ARISTOTLE

डायनोसोर (Dinosaurs) क्या थे ?



करोड़ों वर्ष पहले हमारी धरती पर डायनोसोर नाम के भारी भरकम शरीर वाले विशाल जंतु विचरण करते रहते थे। इनका जन्म लगभग 19 करोड़ वर्ष पहले हुआ था और लगभग 7 करोड़ वर्ष पहले रेंगने वाले इन विशालकाय जंतुओं का अंत हो गया। इनकी टांगें बहुत छोटी थीं और शरीर बहुत भारी भरकम होता था। ये जल और थल दोनों में ही रह सकते थे। ये जानवरों और पेड़-पौधों को खाकर जीवित रहते थे।

शुरू-शुरू में इनका आकार छोटा होता था और ये अपनी पिछली टांगों के सहारे चलते थे। परिवर्तन प्रकृति का अनिवार्य नियम है, अतः धीरे-धीरे इनका आकार बढ़ता गया और इतना बढ़ गया कि छोटी टांगों के सहारे चलना इनके लिए मुश्किल हो गया। इसलिए ये अपना अधिकतर समय नदियों और कीचड़ में ही बिताने लगे।

इन विशालकाय जंतुओं को दो वर्गों में बांटा जाता है : सॉरस्किया (Saurischia) और ओर्नीथिस्किया (Ornithischia). सॉरस्किया वर्ग का पिछला हिस्सा छिपकली की तरह था और ओर्नीथिस्किया वर्ग का पिछला हिस्सा चिड़ियों जैसा। सॉरस्किया वर्ग को दो हिस्सों में बांटा जाता है : सोरोपोड (Sauropod) और थेरोपोड (Theropod). सोरोपोड वे डायनोसोर थे, जो पेड़ - पौधे खाकर जिन्दा रहते थे और थेरोपोड मांसाहारी डायनोसोर थे।

थेरोपोड बहुत ही विशाल आकार के जीव थे। इनमें ब्रॉटोसोरस (Brontosaurus) नाम के जीवों की लम्बाई 24 मीटर (80 फुट) तक थी। इनका भार 35 टन तक था। इनकी गर्दन और पूंछ काफी लंबी थी। ये चार टांगों पर चलते थे। इनसे विशाल जंतु थे ब्रेशियोसौर, जिनका वजन 85 टन तक था।

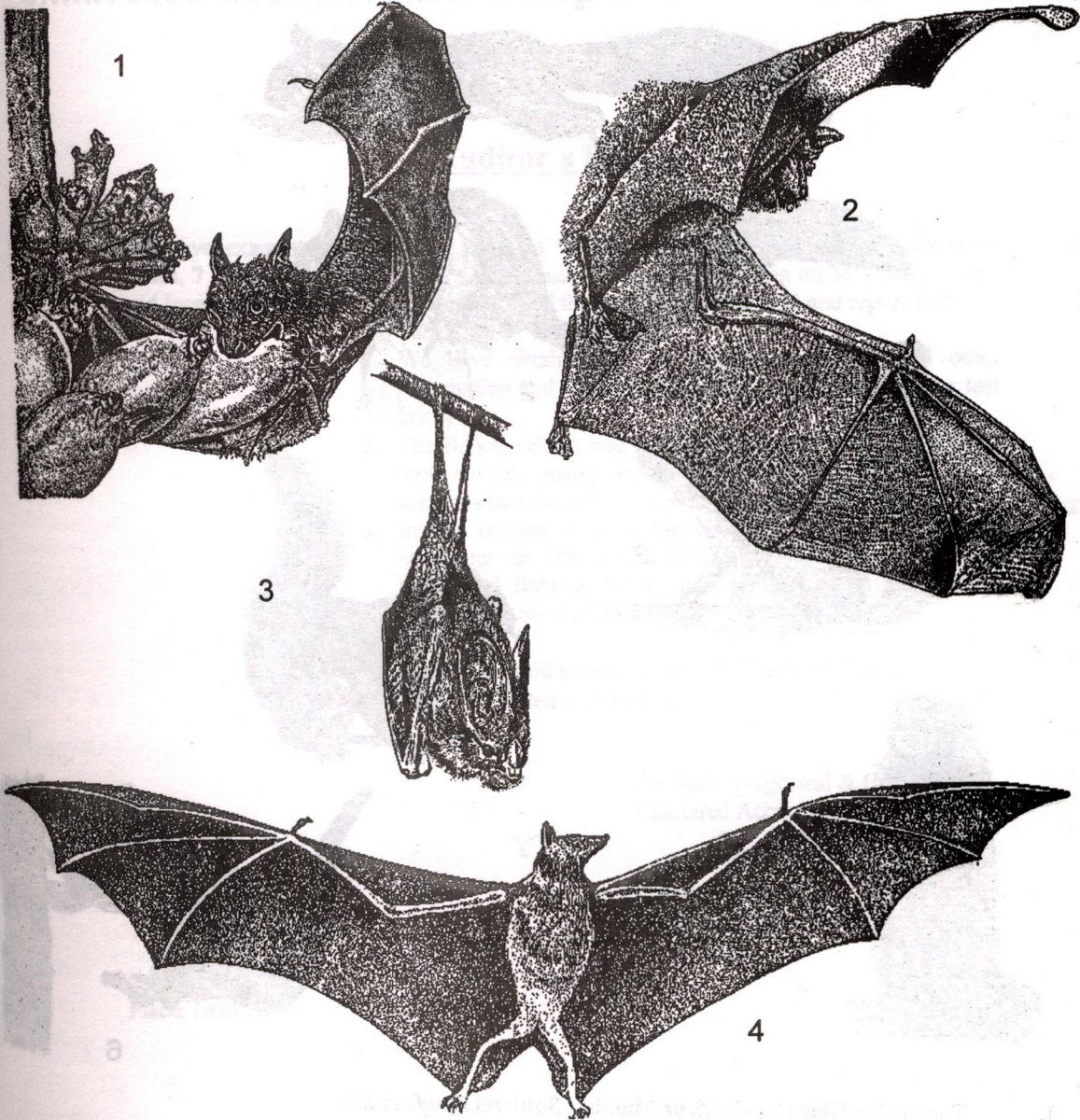
मांसाहारी थेरोपोड अपनी पिछली टांगों पर चलते थे। वे अपनी छोटी-छोटी अगली टांगों को शिकार पकड़ने और उसे चीर कर खाने का काम लेते हैं। ये बड़े ही डरावने जीव थे और सोरोपोडछ प्राणियों तक को मारकर खा जाते थे। इन मांसाहारियों में डायनोसोर बहुत ही भयानक थे। इनकी लंबाई 6 मीटर तक थी और इनके दांत 15 सेमी० (6 इंच) लंबे होते थे, जिनसे ये विशालकाय जंतुओं को आसानी से खा जाते थे।

ओर्नीथिस्किया डायनोसोर का पिछला हिस्सा चिड़ियों से मिलता था। इनकी गर्दन बहुत सख्त थी। कहा जाता है कि इनके दो मस्तिष्क होते थे और ये पानी में तैर भी सकते थे।

ये सभी डायनोसोर लगभग 7 करोड़ वर्ष पहले धरती से समाप्त हो गए। धरती की बदलती परिस्थितियों के अनुसार ये जंतु अपने को बदलती हुई परिस्थितियों के अनुकूल ढाल न पाए और धीरे-धीरे समाप्त हो गए। इनके विषय में केवल अवशेष (Fossil) अध्ययनों से ही जानकारी प्राप्त हुई है।

Wildlife Phot Series for Identification

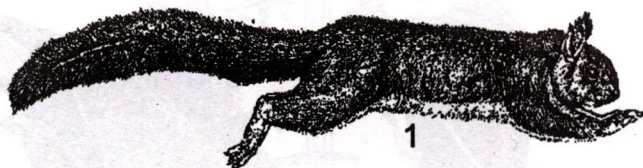
Bats



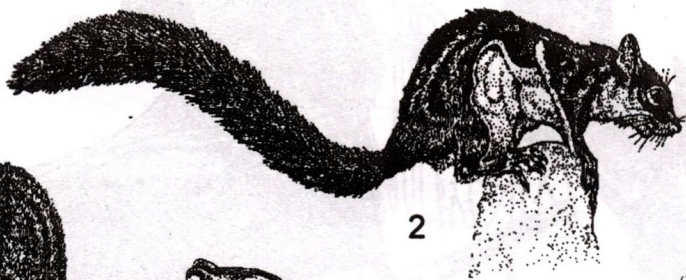
- 1 Indian Short - nosed Fruit Bat *Cynopterus sphinx*
- 2 Greater Horseshoe Bat *Rhinolophus ferrumequinum*
- 3 Indian False Vampire *Megaderma lyra*
- 4 Indian Flying Fox or Greater Fruit Bat *Pteropus giganteus* **Local Names.** Hindi Gadai, Badur; Mar Watwagul; Tamil & Mal Vowval

Wildlife Phot Series for Identification

Squirrel



1



2



3



4



5



6

- 1 The Indian Giant Squirrel, or Malabar Squirrel *Ratufa indica*
- 2 The Red, or Commo Giant Flying Squirrel *Petaurista petaurista*
- 3 The Fivestriped Palm Squirrel *Funambulus pennanti* Local Names Hindi gilheri; Ben. beral Mar. khadikhar; Tamil anna pilli.
- 4 The Malayan Giant Squirrel *Ratufa bicolor* Local Names. Hindi karrat, rasu; Kan keshalilu; Tamil anil
- 5 The Longtailed Marmot *Marmota caudata*
- 6 The Kashmir Flying Squirrel *Hylopetes fimbriatus*

Sachin Agrawal & Co.

CHARTERED ACCOUNTANTS

Office No. 18, First Floor,
Shiva Palace, Opposite Secretariat,
57/19, Rajpur Road, Dehradun.

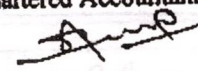
Auditor's Report

We have examined the Balance Sheet of "The Wild Life Preservation Society of India, 7 Astley Hall, Dehradun, Uttranchal, for the period ending on 31st March 2009 and Income & Expenditure account annexed thereto for the same date and report that:

1. We have obtained all the books, vouchers and other information and explanations which is necessary for our test check.
2. The Balance Sheet and Income & Expenditure account dealt with by this report are in agreement with the books of accounts maintained by the said society.
3. In our opinion and to the best of our information and according to the explanations given to us the above mentioned Balance Sheet, Income & expenditure account represent a true and fair view in the case of:

- Balance Sheet of the said society as on 31st March 2009 and
- Deficit for the year ended on that date.

For Sachin Agrawal & Co.
Chartered Accountants


CA Sachin Agrawal
FCA. Mem. No. 078414

Date: 20.04.2009
Place: Dehradun

Office No. 18, First Floor,
Shiva Palace, Opposite Secretariat,
57/19, Rajpur Road, Dehradun.

Sachin Agrawal & Co.

CHARTERED ACCOUNTANTS

THE WILDLIFE PRESERVATION SOCIETY OF INDIA

7 ASTLEY HALL, DEHRADUN

BALANCE SHEET AS ON 31.03.2009

LIABILITIES	AMOUNT	ASSETS	AMOUNT
CAPITAL FUND		FIXED ASSETS	177,065.00
Opening Balance	67,500.00	[as per schedule]	
Add : Life Mem fee			
Other	28,636.00		
Institutional	15,000.00	INVESTMENTS	
	109,136.00	FDR with PNB	73,788.00
		Intt Accrued on FDR	4,639.00
			78,427.00
GENERAL FUND :		CURRENT ASSETS :	
Opening Balance	121,413.29	Cash in hand	-
Less : Deficit	(154,514.00)	PNB 850780	
	(33,100.71)	Astley Hall, Dehradun	122,138.29
Wild Life Up Keep & Protection Fund			122,138.29
Last Balance	300,000.00	Security Deposits :	
		Electricity	40.00
Professional Charges payable	1,655.00	Water	20.00
			60.00
Total Rs....	377,690.29	Total Rs....	377,690.29

Dated : 20.04.2009

Refer to our audit report of even date.

President

Sachin Agrawal
Exe-Fin President
WLPSI Dehradun,

for Sachin Agrawal & Co.
Chartered Accountants

Secretary

[Signature]
Hon'y. Secretary

[CA Sachin Agrawal - FCA]
Mem no 078414

Treasurer

WLPSI Dehradun,

[Signature]
Hon'y. Treasurer
WLPSI Dehradun,

Sachin Agrawal & Co.

CHARTERED ACCOUNTANTS

Office No. 18, First Floor,
Shiva Palace, Opposite Secretariat,
57/19, Rajpur Road, Dehradun.

THE WILDLIFE PRESERVATION SOCIETY OF INDIA

7 ASTLEY HALL, DEHRADUN

INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDING 31.03.2009

EXPENDITURE	AMOUNT	INCOME	AMOUNT
Printing of Cheetal Magazine	58,514.00	Membership Fee	
Printing & Stationery	1,534.02	Annual	7,250.00
Cost of Silver Medal	750.00	Student	700.00
Postage & Telegram	12,296.00	Institutional	22,662.00
House, water and sewer tax	574.00		30,612.00
Electricity charges	6,087.00	Donation	3,625.00
Sweeper Wages	3,000.00		
Office Expenses	30.00	Intt on SB a/c	5,755.00
Honorarium	56,000.00		
Honorarium - Computer operator	6,193.00	Intt on FDR (Accrued & recd)	3,041.00
Building Repair & Maintenance	3,500.00		
Pest Control Expenses	4,000.00	Deficit being excess of Expenditure	
Telephone Expenses	2,650.00	Over income	154,514.00
Audit Fee Paid	1,655.00		
Conveyance Allowance	260.00		
Tours & Travels	20,375.98		
Bank Charges	365.00		
Depreciation as per schedule	19,763.00		
Total Rs....	197,547.00	Total Rs....	197,547.00

Dated : 20.04.2009

President

Exe-Vice President
WLPSI Dehradun.

Secretary

Hony. Secretary
WLPSI Dehradun.

Treasurer

Hony. Treasurer
WLPSI Dehradun.

Refer to our audit report of even date,

for Sachin Agrawal & Co.
Chartered Accountants

(CA Sachin Agrawal - FCA)
Mem no 078414

THE WILDLIFE PRESERVATION SOCIETY OF INDIA
7 ASTLEY HALL, DEHRADUN

SCHEDULE OF FIXED ASSETS AS ON 31.03.2009

Particular	Balance as on 01.04.2008	Addition	Total	Depreciation	Balance as on 31.03.2009
Building	194,970.00	-	194,970.00	19,497.00	175,473.00
Library Books	729.00	-	729.00	109.00	620.00
Furniture & Fixture	242.00	-	242.00	24.00	218.00
Typewriter	887.00	-	887.00	133.00	754.00
Total	196,828.00	-	196,828.00	19,763.00	177,065.00

Dated : 20.04.2009

President

[Signature]
 Ex-Vice President
 WLPSI Dehradun.

Secretary

[Signature]
 Hony. Secretary
 WLPSI Dehradun.

Treasurer

[Signature]
 Hony. Treasurer
 WLPSI Dehradun.

Refer to our audit report of even date,

for Sachin Agrawal & Co.
 Chartered Accountants

[Signature]
 [CA Sachin Agrawal - FCA]
 Mem no 078414

COMPUTATION OF INCOME

NAME THE WILD LIFE PRESERVATION SOCIETY OF INDIA

ADDRESS 7 ASTLEY HALL,
DEHRADUN

STATUS ASSOCIATION OF PERSON

PREV YEAR 2008-2009

ASST YEAR 2009-2010

PAN NO AABTT5162F

ASSESSED TO CIRCLE -2, DEHRADUN

INCOME FROM BUSINESS :

Surplus (Deficit) as per income & expenditure account (154,514.00)

Gross Total Income (154,514.00)

Say Rs (154,514.00)

Tax on above -

Tax Deducted At Source -

Refundable -

RETURN OF FBT :

Since there is no employee in the society,

Therefore the provisions regarding FBT are not applicable to it.



APPLICATION FORM

THE WILDLIFE PRESERVATION SOCIETY OF INDIA

(Established 1958)

7, Astley Hall, Dehra Dun, U.A.

I, hereby apply to be admitted as a Patron/Life/Annual/Affiliated/Institutional/Student Member of the Wildlife Preservation Society of India.

My interests are

Name

Designation

Address

Phone No. & Email

Date of Birth

MEMBERSHIP

All Members get Cheetal (Quarterly) Journal FREE

- | | |
|---|--|
| 1. Patrons : | Rs.25000.00 and above |
| 2. Life : | Rs.2500.00 |
| 3. Annual : | Rs.250.00 subscription per annum
(April to March) |
| 4. Students (School) | Rs.100.00 per annum |
| 5. Affiliated :
(Others similar bodies) | } Rs.400.00 per year |
| 6. Institutional
(Messes, Units, Schools, Colleges,
Govt. Deptts., Corporations,
Societies, NGOs etc.) | |
| 7. Institutional Life | |

All Communications may please be addressed to the Hony. Secretary.

Signature

The Wildlife Preservation Society of India

1. The aims and objects of the Society are as follows :-

- (a) To promote interest and impart knowledge regarding the preservation and conservation of all forms of wildlife, particularly among the youth of the country.
- (b) To cooperate with the Govt. of India and State Governments and with others Societies and Institutions having similar aims and objects in working for the interests of wildlife.
- (c) To assist in enforcing and actively supporting the Forests Acts. Wild Birds and animals Protections Acts and Rules etc. of State Governments and the Indian Arms Act and Rules in so far as they pertain to wildlife and to bring to the notice of the authorities any infringement of the same and to assist in the detention and prosecution of offenders in respect of such laws.
- (d) To advise and help the Govt. and wildlife administrators in the formation, maintenance and protection of Sanctuaries and National Parks, preservation of wildlife in general and endangered species of India in particular and in the introduction of exotic species into the country, rehabilitation of endangered species etc. and in the formulation and amendments of rules and acts, so as to conserve and increase wildlife stocks.
- (e) To raise funds for carrying out the above aims and objects and to found and maintain museums reading rooms and libraries of natural history in order to disseminate knowledge regarding wildlife.
- (f) To carry out publicity and propaganda for the preservation of wildlife in India by means of monographs, journals, films, filmstrips and other feasible methods.
- (g) To assist members of the Society in obtaining facilities for viewing and photographing wildlife in India.
- (h) To conduct research into the problem of Wildlife management in India, and in pursuance of this, to initiate, encourage and, where possible assist in the projects of the study of threatened species and related objects and to provide reference and research facilities for such work.
- (i) To carry on such other activities which will serve the above subjects.

2. What membership of Wildlife Preservation Society of India will entitle you to ?

- (1) You will become an active member of the growing group of Wildlife enthusiasts, who enjoy working for and spreading the knowledge of how to conserve India's heritage of wildlife for posterity.
- (2) You will be entitled to the full use of the library of the Wildlife Preservation Society and of its reading room.
- (3) You will receive a membership certificate.
- (4) You will receive a personal Identification and Membership Card.
- (5) You will be entitled to buy all publications of the Society at a concessional rate.
- (6) You will be entitled to buy at concessional rates the Societies Greeting Cards, Calendars. Tie, Label badges and the Balance of Nature Game (specially Published in colour for its educative and recreational values).
- (7) You will be supplied "Cheetal", the quarterly journal of the society free.

3. For membership particulars write to Honorary Secretary, Wildlife Preservation Society of India 7 Astley Hall, Dehra Dun.

The Wildlife Preservation Society of India

Working President

Shri N.N. Goel Advocate
11-A Nemi Road
Dehradun - 248 001

Executive Vice President

Shri A.S. Negi, IFS (Retd.)
Ex Advisor (Wildlife) Govt. of Uttarakhand
300 Model Colony, Araghar
Dehradun - 248 001

Other Vice Presidents

Shri Ravi Singh
Secretary General & CEO, WWF- India
172, B Lodhi Estate
New Delhi - 3

Shri P.R. Sinha (Ex Officio)
Director, Wild Life Institute of India
Post Box 18, Chandrabani
Dehradun

Dr. R.B.S. Rawat IFS
Principal Chief Conservator of Forests, Uttarakhand
85, Rajpur Road, Dehradun - 248 001

Shri S. Chandola, IFS
Add. PCCF & Chief Wildlife Warden, Uttarakhand
Camp Office-Chandrabani, Dehradun

Honorary Secretary

Shri I.S. Negi, IFS (Retd.)
12, Sewak Ashram Road,
Dehradun - 248 001

(Ex Officio) Hon. Asst. Secretary

Shri Narendra Singh
21/2-3, Teg Bahadur Road No.4
Dehradun - 248 001

Honorary Treasurer

Dr. S.P. Singh
9A Sewak Ashram Road,
Dehradun - 248 001

Administrative Officer

Shri Pravin Singh Rawat
25/2, E.C. Road
Dehradun - 248001

Editorial Board

1. A.S. Negi

2. Purva Mehta

3. Dr. S.P. Singh